The People of Sand and Slag

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- The People of Sand and Slag

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by Paolo Bacigalupi

"Hostile movement! Well inside the perimeter! Well inside!"

I stripped off my Immersive Response goggles as adrenaline surged through me. The virtual cityscape I'd been about to raze disappeared, replaced by our monitoring room's many views of SesCo's mining operations. On one screen, the red phosphorescent tracery of an intruder skated across a terrain map, a hot blip like blood spattering its way toward Pit 8.

Jaak was already out of the monitoring room. I ran for my gear.

I caught up with Jaak in the equipment room as he grabbed a TS-101 and slashbangs and dragged his impact exoskeleton over his tattooed body. He draped bandoleers of surgepacks over his massive shoulders and ran for the outer locks. I strapped on my own exoskeleton, pulled my 101 from its rack, checked its charge, and followed.

Lisa was already in the HEV, its turbofans screaming like banshees when the hatch dilated. Sentry centaurs leveled their 101's at me, then relaxed as friend/foe data spilled into their heads-up displays. I bolted across the tarmac, my skin pricking under blasts of icy Montana wind and the jet wash of Hentasa Mark V engines. Overhead, the clouds glowed orange with light from SesCo's mining bots.

"Come on, Chen! Move! Move! Move!"

I dove into the hunter. The ship leaped into the sky. It banked, throwing me against a bulkhead, then the Hentasas cycled wide and the hunter punched forward. The HEV's hatch slid shut. The wind howl muted.

I struggled forward to the flight cocoon and peered over Jaak's and Lisa's shoulders to the landscape beyond.

"Have a good game?" Lisa asked.

I scowled. "I was about to win. I made it to Paris."

We cut through the mists over the catchment lakes, skimming inches above the water, and then we hit the far shore. The hunter lurched as its anti-collision software jerked us away from the roughening terrain. Lisa overrode the computers and forced the ship back down against the soil, driving us so low I could have reached out and dragged my hands through the broken scree as we screamed over it.

Alarms yowled. Jaak shut them off as Lisa pushed the hunter lower. Ahead, a tailings ridge loomed. We ripped up its face and

dropped sickeningly into the next valley. The Hentasas shuddered as Lisa forced them to the edge of their design buffer. We hurtled up and over another ridge. Ahead, the ragged cutscape of mined mountains stretched to the horizon. We dipped again into mist and skimmed low over another catchment lake, leaving choppy wake in the thick golden waters.

Jaak studied the hunter's scanners. "I've got it." He grinned. "It's moving, but slow."

"Contact in one minute," Lisa said. "He hasn't launched any countermeasures."

I watched the intruder on the tracking screens as they displayed real-time data fed to us from SesCo's satellites. "It's not even a masked target. We could have dropped a mini on it from base if we'd known he wasn't going to play hide-and-seek."

"Could have finished your game," Lisa said.

"We could still nuke him." Jaak suggested.

I shook my head. "No, let's take a look. Vaporizing him won't leave us anything and Bunbaum will want to know what we used the hunter for."

"Thirty seconds."

"He wouldn't care if someone hadn't taken the hunter on a joyride to Cancun."

Lisa shrugged. "I wanted to swim. It was either that, or rip off your kneecaps."

The hunter lunged over another series of ridges.

Jaak studied his monitor. "Target's moving away. He's still slow. We'll get him."

"Fifteen seconds to drop," Lisa said. She unstrapped and switched the hunter to software. We all ran for the hatch as the HEV yanked itself skyward, its auto pilot desperate to tear away from the screaming hazard of the rocks beneath its belly.

We plunged out the hatch, one, two, three, falling like Icarus. We slammed into the ground at hundreds of kilometers per hour. Our exoskeletons shattered like glass, flinging leaves into the sky. The shards fluttered down around us, black metallic petals absorbing our enemy's radar and heat detection while we rolled to jarred vulnerable stops in muddy scree.

The hunter blew over the ridge, Hentasas shrieking, a blazing target. I dragged myself upright and ran for the ridge, my feet churning through yellow tailings mud and rags of jaundiced snow. Behind me, Jaak was down with smashed arms. The leaves of his exoskeleton marked his roll path, a long trail of black shimmering metal. Lisa lay a hundred yards away, her femur rammed through her thigh like a bright white exclamation mark.

I reached the top of the ridge and stared down into the valley.

Nothing.

I dialed up the magnification of my helmet. The monotonous slopes of more tailings rubble spread out below me. Boulders, some as large as our HEV, some cracked and shattered by high explosives, shared the slopes with the unstable yellow shale and fine grit of waste materials from SesCo's operations.

Jaak slipped up beside me, followed a moment later by Lisa, her flight suit's leg torn and bloodied. She wiped yellow mud off her face and ate it as she studied the valley below. "Anything?"

I shook my head. "Nothing yet. You okay?"

"Clean break."

Jaak pointed. "There!"

Down in the valley, something was running, flushed by the hunter. It slipped along a shallow creek, viscous with tailings acid. The ship herded it toward us. Nothing. No missile fire. No slag. Just the running creature. A mass of tangled hair. Quadrupedal. Splattered with mud.

"Some kind of bio-job?" I wondered.

"It doesn't have any hands," Lisa murmured.

"No equipment either."

Jaak muttered. "What kind of sick bastard makes a bio-job without hands?"

I searched the nearby ridgelines. "Decoy, maybe?"

Jaak checked his scanner data, piped in from the hunter's more aggressive instruments. "I don't think so. Can we put the hunter up higher? I want to look around."

At Lisa's command, the hunter rose, allowing its sensors a fuller reach. The howl of its turbofans became muted as it gained altitude.

Jaak waited as more data spat into his heads-up display. "Nope, nothing. And no new alerts from any of the perimeter stations, either. We're alone."

Lisa shook her head. "We should have just dropped a mini on it from base."

Down in the valley, the bio-job's headlong run slowed to a trot. It seemed unaware of us. Closer now, we could make out its shape: A shaggy quadruped with a tail. Dreadlocked hair dangled from its shanks like ornaments, tagged with tailings mud clods. It was stained around its legs from the acids of the catchment ponds, as though it had forded streams of urine.

"That's one ugly bio-job," I said.

Lisa shouldered her 101. "Bio-melt when I'm done with it."

"Wait!" Jaak said. "Don't slag it!"

Lisa glanced over at him, irritated. "What now?"

“That’s not a bio-job at all.” Jaak whispered. “That’s a dog.”

He stood suddenly and jumped over the hillside, running headlong down the scree toward the animal.

“Wait!” Lisa called, but Jaak was already fully exposed and blurring to his top speed.

The animal took one look at Jaak, whooping and hollering as he came roaring down the slope, then turned and ran. It was no match for Jaak. Half a minute later he overtook the animal.

Lisa and I exchanged glances. “Well,” she said, “it’s awfully slow if it’s a bio-job. I’ve seen centaurs walk faster.”

By the time we caught up with Jaak and the animal, Jaak had it cornered in a dull gully. The animal stood in the center of a trickling ditch of sludgy water, shaking and growling and baring its teeth at us as we surrounded it. It tried to break around us, but Jaak kept it corralled easily.

Up close, the animal seemed even more pathetic than from a distance, a good thirty kilos of snarling mange. Its paws were slashed and bloody and patches of fur were torn away, revealing festering chemical burns underneath.

“I’ll be damned,” I breathed, staring at the animal. “It really looks like a dog.”

Jaak grinned. “It’s like finding a goddamn dinosaur.”

“How could it live out here?” Lisa’s arm swept the horizon. “There’s nothing to live on. It’s got to be modified.” She studied it closely, then glanced at Jaak. “Are you sure nothing’s coming in on the perimeter? This isn’t some kind of decoy?”

Jaak shook his head. “Nothing. Not even a peep.”

I leaned in toward the creature. It bared its teeth in a rictus of hatred. “It’s pretty beat up. Maybe it’s the real thing.”

Jaak said, “Oh yeah, it’s the real thing all right. I saw a dog in a zoo once. I’m telling you, this is a dog.”

Lisa shook her head. “It can’t be. It would be dead, if it were a real dog.”

Jaak just grinned and shook his head. “No way. Look at it.” He reached out to push the hair out of the animal’s face so that we could see its muzzle.

The animal lunged and its teeth sank into Jaak’s arm. It shook his arm violently, growling as Jaak stared down at the creature latched onto his flesh. It yanked its head back and forth, trying to tear Jaak’s arm off. Blood spurted around its muzzle as its teeth found Jaak’s arteries.

Jaak laughed. His bleeding stopped. “Damn. Check that out.” He lifted his arm until the animal dangled fully out of the stream, dripping. “I got me a pet.”

The dog swung from the thick bough of Jaak's arm. It tried to shake his arm once again, but its movements were ineffectual now that it hung off the ground. Even Lisa smiled.

"Must be a bummer to wake up and find out you're at the end of your evolutionary curve."

The dog growled, determined to hang on.

Jaak laughed and drew his monomol knife. "Here you go, doggy." He sliced his arm off, leaving it in the bewildered animal's mouth.

Lisa cocked her head. "You think we could make some kind of money on it?"

Jaak watched as the dog devoured his severed arm. "I read somewhere that they used to eat dogs. I wonder what they taste like."

I checked the time in my heads-up display. We'd already killed an hour on an exercise that wasn't giving any bonuses. "Get your dog, Jaak, and get it on the hunter. We aren't going to eat it before we call Bunbaum."

"He'll probably call it company property," Jaak groused.

"Yeah, that's the way it always goes. But we still have to report. Might as well keep the evidence, since we didn't nuke it."

* * *

We ate sand for dinner. Outside the security bunker, the mining robots rumbled back and forth, ripping deeper into the earth, turning it into a mush of tailings and rock acid that they left in exposed ponds when they hit the water table, or piled into thousand-foot mountainscapes of waste soil. It was comforting to hear those machines cruising back and forth all day. Just you and the bots and the profits, and if nothing got bombed while you were on duty, there was always a nice bonus.

After dinner we sat around and sharpened Lisa's skin, implanting blades along her limbs so that she was like a razor from all directions. She'd considered monomol blades, but it was too easy to take a limb off accidentally, and we lost enough body parts as it was without adding to the mayhem. That kind of garbage was for people who didn't have to work: aesthetes from New York City and California.

Lisa had a DermDecora kit for the sharpening. She'd bought it last time we'd gone on vacation and spent extra to get it, instead of getting one of the cheap knock-offs that were cropping up. We worked on cutting her skin down to the bone and setting the blades. A friend of ours in L.A said that he just held DermDecora parties so everyone could do their modifications and help out with the hard-to-reach places.

Lisa had done my glowspine, a sweet tracery of lime landing lights that ran from my tailbone to the base of my skull, so I didn't mind helping her out, but Jaak, who did all of his modification with an old-time scar and tattoo shop in Hawaii, wasn't so pleased. It was a little frustrating because her flesh kept trying to close before we had the blades set, but eventually we got the hang of it, and an hour later, she started looking good.

Once we finished with Lisa's front settings, we sat around and fed her. I had a bowl of tailings mud that I drizzled into her mouth to speed her integration process. When we were weren't feeding her, we watched the dog. Jaak had shoved it into a makeshift cage in one corner of our common room. It lay there like it was dead.

Lisa said, "I ran its DNA. It really is a dog."

"Bunbaum believe you?"

She gave me a dirty look. "What do you think?"

I laughed. At SesCo, tactical defense responders were expected to be fast, flexible, and deadly, but the reality was our SOP was always the same: drop nukes on intruders, slag the leftovers to melt so they couldn't regrow, hit the beaches for vacation. We were independent and trusted as far as tactical decisions went, but there was no way SesCo was going to believe its slag soldiers had found a dog in their tailings mountains.

Lisa nodded. "He wanted to know how the hell a dog could live out here. Then he wanted to know why we didn't catch it sooner. Wanted to know what he pays us for." She pushed her short blond hair off her face and eyed the animal. "I should have slagged it."

"What's he want us to do?"

"It's not in the manual. He's calling back."

I studied the limp animal. "I want to know how it was surviving. Dogs are meat eaters, right?"

"Maybe some of the engineers were giving it meat. Like Jaak did."

Jaak shook his head. "I don't think so. The sucker threw up my arm almost right after he ate it." He wiggled his new stump where it was rapidly regrowing. "I don't think we're compatible for it."

I asked, "But we could eat it, right?"

Lisa laughed and took a spoonful of tailings. "We can eat anything. We're the top of the food chain."

"Weird how it can't eat us."

"You've probably got more mercury and lead running through your blood than any pre-weeviltech animal ever could have had."

"That's bad?"

"Used to be poison."

"Weird."

Jaak said, “I think I might have broken it when I put it in the cage.” He studied it seriously. “It’s not moving like it was before. And I heard something snap when I stuffed it in.”

“So?”

Jaak shrugged. “I don’t think it’s healing.”

The dog did look kind of beat up. It just lay there, its sides going up and down like a bellows. Its eyes were half-open, but didn’t seem to be focused on any of us. When Jaak made a sudden movement, it twitched for a second, but it didn’t get up. It didn’t even growl.

Jaak said, “I never thought an animal could be so fragile.”

“You’re fragile, too. That’s not such a big surprise.”

“Yeah, but I only broke a couple bones on it, and now look at it. It just lies there and pants.”

Lisa frowned thoughtfully. “It doesn’t heal.” She climbed awkwardly to her feet and went to peer into the cage. Her voice was excited. “It really is a dog. Just like we used to be. It could take weeks for it to heal. One broken bone, and it’s done for.”

She reached a razored hand into the cage and sliced a thin wound into its shank. Blood oozed out, and kept oozing. It took minutes for it to begin clotting. The dog lay still and panted, clearly wasted.

She laughed. “It’s hard to believe we ever lived long enough to evolve out of that. If you chop off its legs, they won’t regrow.” She cocked her head, fascinated. “It’s as delicate as rock. You break it, and it never comes back together.” She reached out to stroke the matted fur of the animal. “It’s as easy to kill as the hunter.”

The comm buzzed. Jaak went to answer.

Lisa and I stared at the dog, our own little window into pre-history.

Jaak came back into the room. “Bunbaum’s flying out a biologist to take a look at it.”

“You mean a bio-engineer,” I corrected him.

“Nope. Biologist. Bunbaum said they study animals.”

Lisa sat down. I checked her blades to see if she’d knocked anything loose. “There’s a dead-end job.”

“I guess they grow them out of DNA. Study what they do. Behavior, shit like that.”

“Who hires them?”

Jaak shrugged. “Pau Foundation has three of them on staff. Origin of life guys. That’s who’s sending out this one. Mushi-something. Didn’t get his name.”

“Origin of life?”

“Sure, you know, what makes us tick. What makes us alive. Stuff like that.”

I poured a handful of tailings mud into Lisa’s mouth. She gobbled

it gratefully. “Mud makes us tick,” I said.

Jaak nodded at the dog. “It doesn’t make that dog tick.”

We all looked at the dog. “It’s hard to tell what makes it tick.”

* * *

Lin Musharraf was a short guy with black hair and a hooked nose that dominated his face. He had carved his skin with swirling patterns of glow implants, so he stood out as cobalt spirals in the darkness as he jumped down from his chartered HEV.

The centaurs went wild about the unauthorized visitor and corralled him right up against his ship. They were all over him and his DNA kit, sniffing him, running their scanners over his case, pointing their 101’s into his glowing face and snarling at him.

I let him sweat for a minute before calling them away. The centaurs backed off, swearing and circling, but didn’t slag him. Musharraf looked shaken. I couldn’t blame him. They’re scary monsters: bigger and faster than a man. Their behavior patches make them vicious, their sentience upgrades give them the intelligence to operate military equipment, and their basic fight/flight response is so impaired that they only know how to attack when they’re threatened. I’ve seen a half-slagged centaur tear a man to pieces barehanded and then join an assault on enemy ridge fortifications, dragging its whole melted carcass forward with just its arms. They’re great critters to have at your back when the slag starts flying.

I guided Musharraf out of the scrum. He had a whole pack of memory addendums blinking off the back of his skull: a fat pipe of data retrieval, channeled direct to the brain, and no smash protection. The centaurs could have shut him down with one hard tap to the back of the head. His cortex might have grown back, but he wouldn’t have been the same. Looking at those blinking triple fins of intelligence draping down the back of his head, you could tell he was a typical lab rat. All brains, no survival instincts. I wouldn’t have stuck mem-adds into my head even for a triple bonus.

“You’ve got a dog?” Musharraf asked when we were out of reach of the centaurs.

“We think so.” I led him down into the bunker, past our weapons racks and weight rooms to the common room where we’d stored the dog. The dog looked up at us as we came in, the most movement it had made since Jaak put it in the cage.

Musharraf stopped short and stared. “Remarkable.”

He knelt in front of the animal’s cage and unlocked the door. He held out a handful of pellets. The dog dragged itself upright.

Musharraf backed away, giving it room, and the dog followed stiff and wary, snuffling after the pellets. It buried its muzzle in his brown hand, snorting and gobbling at the pellets.

Musharraf looked up. “And you found it in your tailings pits?”

“That’s right.”

“Remarkable.”

The dog finished the pellets and snuffled his palm for more. Musharraf laughed and stood. “No more for you. Not right now.” He opened his DNA kit, pulled out a sampler needle and stuck the dog. The sampler’s chamber filled with blood.

Lisa watched. “You talk to it?”

Musharraf shrugged. “It’s a habit.”

“But it’s not sentient.”

“Well, no, but it likes to hear voices.” The chamber finished filling. He withdrew the needle, disconnected the collection chamber and fitted it into the kit. The analysis software blinked alive and the blood disappeared into the heart of the kit with a soft vacuum hiss.

“How do you know?”

Musharraf shrugged. “It’s a dog. Dogs are that way.”

We all frowned. Musharraf started running tests on the blood, humming tunelessly to himself as he worked. His DNA kit peeped and squawked. Lisa watched him run his tests, clearly pissed off that SesCo had sent out a lab rat to retest what she had already done. It was easy to understand her irritation. A centaur could have run those DNA tests.

“I’m astounded that you found a dog in your pits,” Musharraf muttered.

Lisa said, “We were going to slag it, but Bunbaum wouldn’t let us.”

Musharraf eyed her. “How restrained of you.”

Lisa shrugged. “Orders.”

“Still, I’m sure your thermal surge weapon presented a powerful temptation. How good of you not to slag a starving animal.”

Lisa frowned suspiciously. I started to worry that she might take Musharraf apart. She was crazy enough without people talking down to her. The memory addendums on the back of his head were an awfully tempting target: one slap, down goes the lab rat. I wondered if we sank him in a catchment lake if anyone would notice him missing. A biologist, for Christ’s sake.

Musharraf turned back to his DNA kit, apparently unaware of his hazard. “Did you know that in the past, people believed that we should have compassion for all things on Earth? Not just for ourselves, but for all living things?”

“So?”

“I would hope you will have compassion for one foolish scientist and not dismember me today.”

Lisa laughed. I relaxed. Encouraged, Musharraf said, “It truly is remarkable that you found such a specimen amongst your mining operations. I haven’t heard of a living specimen in ten or fifteen years.”

“I saw one in a zoo, once,” Jaak said.

“Yes, well, a zoo is the only place for them. And laboratories, of course. They still provide useful genetic data.” He was studying the results of the tests, nodding to himself as information scrolled across the kit’s screen.

Jaak grinned. “Who needs animals if you can eat stone?”

Musharraf began packing up his DNA kit. “Weeviltech. Precisely. We transcended the animal kingdom.” He latched his kit closed and nodded to us all. “Well, it’s been quite enlightening. Thank you for letting me see your specimen.”

“You’re not going to take it with you?”

Musharraf paused, surprised. “Oh no. I don’t think so.”

“It’s not a dog, then?”

“Oh no, it’s quite certainly a real dog. But what on Earth would I do with it?” He held up a vial of blood. “We have the DNA. A live one is hardly worth keeping around. Very expensive to maintain, you know. Manufacturing a basic organism’s food is quite complex. Clean rooms, air filters, special lights. Recreating the web of life isn’t easy. Far more simple to release oneself from it completely than to attempt to recreate it.” He glanced at the dog. “Unfortunately, our furry friend over there would never survive weeviltech. The worms would eat him as quickly as they eat everything else. No, you would have to manufacture the animal from scratch. And really, what would be the point of that? A bio-job without hands?” He laughed and headed for his HEV.

We all looked at each other. I jogged after the doctor and caught up with him at the hatch to the tarmac. He had paused on the verge of opening it. “Your centaurs know me now?” he asked.

“Yeah, you’re fine.”

“Good.” He dilated the hatch and strode out into the cold.

I trailed after him. “Wait! What are we supposed to do with it?”

“The dog?” The doctor climbed into the HEV and began strapping in. Wind whipped around us, carrying stinging grit from the tailings piles. “Turn it back to your pits. Or you could eat it, I suppose. I understand that it was a real delicacy. There are recipes for cooking animals. They take time, but they can give quite extraordinary results.”

Musharraf’s pilot started cycling up his turbofans.

“Are you kidding?”

Musharraf shrugged and shouted over the increasing scream of the engines. “You should try it! Just another part of our heritage that’s atrophied since weeviltech!”

He yanked down the flight cocoon’s door, sealing himself inside. The turbofans cycled higher and the pilot motioned me back from their wash as the HEV slowly lifted into the air.

* * *

Lisa and Jaak couldn’t agree on what we should do with the dog. We had protocols for working out conflict. As a tribe of killers, we needed them. Normally, consensus worked for us, but every once in a while, we just got tangled up and stuck to our positions, and after that, not much could get done without someone getting slaughtered. Lisa and Jaak dug in, and after a couple days of wrangling, with Lisa threatening to cook the thing in the middle of the night while Jaak wasn’t watching, and Jaak threatening to cook her if she did, we finally went with a majority vote. I got to be the tie-breaker.

“I say we eat it,” Lisa said.

We were sitting in the monitoring room, watching satellite shots of the tailings mountains and the infrared blobs of the mining bots while they ripped around in the earth. In one corner, the object of our discussion lay in its cage, dragged there by Jaak in an attempt to sway the result. He spun his observation chair, turning his attention away from the theater maps. “I think we should keep it. It’s cool. Old-timey, you know? I mean, who the hell do you know who has a real dog?”

“Who the hell wants the hassle?” Lisa responded. “I say we try real meat.” She cut a line in her forearm with her razors. She ran her finger along the resulting blood beads and tasted them as the wound sealed.

They both looked at me. I looked at the ceiling. “Are you sure you can’t decide this without me?”

Lisa grinned. “Come on, Chen, you decide. It was a group find. Jaak won’t pout, will you?”

Jaak gave her a dirty look.

I looked at Jaak. “I don’t want its food costs to come out of group bonuses. We agreed we’d use part of it for the new Immersive Response. I’m sick of the old one.”

Jaak shrugged. “Fine with me. I can pay for it out of my own. I just won’t get any more tats.”

I leaned back in my chair, surprised, then looked at Lisa. “Well, if Jaak wants to pay for it, I think we should keep it.”

Lisa stared at me, incredulous. “But we could cook it!”

I glanced at the dog where it lay panting in its cage. “It’s like having a zoo of our own. I kind of like it.”

* * *

Musharraf and the Pau Foundation hooked us up with a supply of food pellets for the dog and Jaak looked up an old database on how to splint its busted bones. He bought water filtration so that it could drink.

I thought I’d made a good decision, putting the costs on Jaak, but I didn’t really foresee the complications that came with having an unmodified organism in the bunker. The thing shit all over the floor, and sometimes it wouldn’t eat, and it would get sick for no reason, and it was slow to heal so we all ended up playing nursemaid to the thing while it lay in its cage. I kept expecting Lisa to break its neck in the middle of the night, but even though she grumbled, she didn’t assassinate it.

Jaak tried to act like Musharraf. He talked to the dog. He logged onto the libraries and read all about old-time dogs. How they ran in packs. How people used to breed them.

We tried to figure out what kind of dog it was, but we couldn’t narrow it down much, and then Jaak discovered that all the dogs could interbreed, so all you could do was guess that it was some kind of big sheep dog, with maybe a head from a Rottweiler, along with maybe some other kind of dog, like a wolf or coyote or something.

Jaak thought it had coyote in it because they were supposed to have been big adapters, and whatever our dog was, it must have been a big adapter to hang out in the tailings pits. It didn’t have the boosters we had, and it had still lived in the rock acids. Even Lisa was impressed by that.

* * *

I was carpet bombing Antarctic Recessionists, swooping low, driving the suckers further and further along the ice floe. If I got lucky, I’d drive the whole village out onto a vestigial shelf and sink them all before they knew what was happening. I dove again, strafing and then spinning away from their return slag.

It was fun, but mostly just a way to kill time between real bombing runs. The new IR was supposed to be as good as the arcades, full immersion and feedback, and portable to boot. People got so lost

they had to take intravenous feedings or they withered away while they were inside.

I was about to sink a whole load of refugees when Jaak shouted. "Get out here! You've got to see this!"

I stripped off my goggles and ran for the monitoring room, adrenaline amping up. When I got there, Jaak was just standing in the center of the room with the dog, grinning.

Lisa came tearing in a second later. "What? What is it?" Her eyes scanned the theater maps, ready for bloodshed.

Jaak grinned. "Look at this." He turned to the dog and held out his hand. "Shake."

The dog sat back on its haunches and gravely offered him its paw. Jaak grinned and shook the paw, then tossed it a food pellet. He turned to us and bowed.

Lisa frowned. "Do it again."

Jaak shrugged and went through the performance a second time.

"It thinks?" she asked.

Jaak shrugged. "Got me. You can get it to do things. The libraries are full of stuff on them. They're trainable. Not like a centaur or anything, but you can make them do little tricks, and if they're certain breeds, they can learn special stuff, too."

"Like what?"

"Some of them were trained to attack. Or to find explosives."

Lisa looked impressed. "Like nukes and stuff?"

Jaak shrugged. "I guess."

"Can I try?" I asked.

Jaak nodded. "Go for it."

I went over to the dog and stuck out my hand. "Shake."

It stuck out its paw. My hackles went up. It was like sending signals to aliens. I mean, you expect a bio-job or a robot to do what you want it to. Centaur, go get blown up. Find the op-force. Call reinforcements. The HEV was like that, too. It would do anything. But it was designed.

"Feed it," Jaak said, handing me a food pellet. "You have to feed it when it does it right."

I held out the food pellet. The dog's long pink tongue swabbed my palm.

I held out my hand again. "Shake." I said. It held out its paw. We shook hands. Its amber eyes stared up at me, solemn.

"That's some weird shit," Lisa said. I shivered, nodding and backed away. The dog watched me go.

That night in my bunk, I lay awake, reading. I'd turned out the lights and only the book's surface glowed, illuminating the bunkroom in a soft green aura. Some of Lisa's art buys glimmered dimly from the

walls: a bronze hanging of a phoenix breaking into flight, stylized flames glowing around it; a Japanese woodblock print of Mount Fuji and another of a village weighed down under thick snows; a photo of the three of us in Siberia after the Peninsula campaign, grinning and alive amongst the slag.

Lisa came into the room. Her razors glinted in my book's dim light, flashes of green sparks that outlined her limbs as she moved.

"What are you reading?" She stripped and squeezed into bed with me.

I held up the book and read out loud:

Cut me I won't bleed. Gas me I won't breathe.
Stab me, shoot me, slash me, smash me
I have swallowed science
I am God.
Alone.

I closed the book and its glow died. In the darkness, Lisa rustled under the covers.

My eyes adjusted. She was staring at me. "'Dead Man,' right?"

"Because of the dog," I said.

"Dark reading." She touched my shoulder, her hand warm, the blades embedded, biting lightly into my skin.

"We used to be like that dog," I said.

"Pathetic."

"Scary."

We were quiet for a little while. Finally I asked, "Do you ever wonder what would happen to us if we didn't have our science? If we didn't have our big brains and our weeviltech and our cellstims and — "

"And everything that makes our life good?" She laughed. "No." She rubbed my stomach. "I like all those little worms that live in your belly." She started to tickle me.

Wormy, squirmy in your belly,
wormy squirmy feeds you Nelly.
Microweevils eat the bad,
and give you something good instead.

I fought her off, laughing. "That's no Yearly."

"Third Grade. Basic bio-logic. Mrs. Alvarez. She was really big on weeviltech."

She tried to tickle me again but I fought her off. "Yeah, well Yearly only wrote about immortality. He wouldn't take it."

Lisa gave up on the tickling and flopped down beside me again. "Blah, blah, blah. He wouldn't take any gene modifications. No c-cell inhibitors. He was dying of cancer and he wouldn't take the drugs that would have saved him. Our last mortal poet. Cry me a river. So

what?"

"You ever think about why he wouldn't?"

"Yeah. He wanted to be famous. Suicide's good for attention."

"Seriously, though. He thought being human meant having animals. The whole web of life thing. I've been reading about him. It's weird shit. He didn't want to live without them."

"Mrs. Alvarez hated him. She had some rhymes about him, too. Anyway, what were we supposed to do? Work out weeviltech and DNA patches for every stupid species? Do you know what that would have cost?" She nuzzled close to me. "If you want animals around you, go to a zoo. Or get some building blocks and make something, if it makes you happy. Something with hands, for god's sake, not like that dog." She stared at the underside of the bunk above. "I'd cook that dog in a second."

I shook my head. "I don't know. That dog's different from a bio-job. It looks at us, and there's something there, and it's not us. I mean, take any bio-job out there, and it's basically us, poured into another shape, but not that dog…." I trailed off, thinking.

Lisa laughed. "It shook hands with you, Chen. You don't worry about a centaur when it salutes." She climbed on top of me. "Forget the dog. Concentrate on something that matters." Her smile and her razor blades glinted in the dimness.

* * *

I woke up to something licking my face. At first I thought it was Lisa, but she'd climbed into her own bunk. I opened my eyes and found the dog.

It was a funny thing to have this animal licking me, like it wanted to talk, or say hello or something. It licked me again, and I thought that it had come a long way from when it had tried to take off Jaak's arm. It put its paws up on my bed, and then in a single heavy movement, it was up on the bunk with me, its bulk curled against me.

It slept there all night. It was weird having something other than Lisa lying next to me, but it was warm and there was something friendly about it. I couldn't help smiling as I drifted back to sleep.

* * *

We flew to Hawaii for a swimming vacation and we brought the dog with us. It was good to get out of the northern cold and into the gentle Pacific. Good to stand on the beach, and look out to a limitless

horizon. Good to walk along the beach holding hands while black waves crashed on the sand.

Lisa was a good swimmer. She flashed through the ocean's metallic sheen like an eel out of history and when she surfaced, her naked body glistened with hundreds of iridescent petroleum jewels.

When the Sun started to set, Jaak lit the ocean on fire with his 101. We all sat and watched as the Sun's great red ball sank through veils of smoke, its light shading deeper crimson with every minute. Waves rushed flaming onto the beach. Jaak got out his harmonica and played while Lisa and I made love on the sand.

We'd intended to amputate her for the weekend, to let her try what she had done to me the vacation before. It was a new thing in L.A., an experiment in vulnerability.

She was beautiful, lying there on the beach, slick and excited with all of our play in the water. I licked oil opals off her skin as I sliced off her limbs, leaving her more dependent than a baby. Jaak played his harmonica and watched the Sun set, and watched as I rendered Lisa down to her core.

After our sex, we lay on the sand. The last of the Sun was dropping below the water. Its rays glinted redly across the smoldering waves. The sky, thick with particulates and smoke, shaded darker.

Lisa sighed contentedly. "We should vacation here more often."

I tugged on a length of barbed-wire buried in the sand. It tore free and I wrapped it around my upper arm, a tight band that bit into my skin. I showed it to Lisa. "I used to do this all the time when I was a kid." I smiled. "I thought I was so bad-ass."

Lisa smiled. "You are."

"Thanks to science." I glanced over at the dog. It was lying on the sand a short distance away. It seemed sullen and unsure in its new environment, torn away from the safety of the acid pits and tailings mountains of its homeland. Jaak sat beside the dog and played. Its ears twitched to the music. He was a good player. The mournful sound of the harmonica carried easily over the beach to where we lay.

Lisa turned her head, trying to see the dog. "Roll me."

I did what she asked. Already, her limbs were regrowing. Small stumps, which would build into larger limbs. By morning, she would be whole, and ravenous. She studied the dog. "This is as close as I'll ever get to it," she said.

"Sorry?"

"It's vulnerable to everything. It can't swim in the ocean. It can't eat anything. We have to fly its food to it. We have to scrub its water. Dead end of an evolutionary chain. Without science, we'd be as vulnerable as it." She looked up at me. "As vulnerable as I am now." She grinned. "This is as close to death as I've ever been. At least, not

in combat."

"Wild, isn't it?"

"For a day. I liked it better when I did it to you. I'm already starving."

I fed her a handful of oily sand and watched the dog, standing uncertainly on the beach, sniffing suspiciously at some rusting scrap iron that stuck out of the beach like a giant memory fin. It pawed up a chunk of red plastic rubbed shiny by the ocean and chewed on it briefly, before dropping it. It started licking around its mouth. I wondered if it had poisoned itself again.

"It sure can make you think," I muttered. I fed Lisa another handful of sand. "If someone came from the past, to meet us here and now, what do you think they'd say about us? Would they even call us human?"

Lisa looked at me seriously. "No, they'd call us gods."

Jaak got up and wandered into the surf, standing knee-deep in the black smoldering waters. The dog, driven by some unknown instinct, followed him, gingerly picking its way across the sand and rubble.

* * *

The dog got tangled in a cluster of wire our last day on the beach. Really ripped the hell out of it: slashes through its fur, broken legs, practically strangled. It had gnawed one of its own paws half off trying to get free. By the time we found it, it was a bloody mess of ragged fur and exposed meat.

Lisa stared down at the dog. "Christ, Jaak, you were supposed to be watching it."

"I went swimming. You can't keep an eye on the thing all the time."

"It's going to take forever to fix this," she fumed.

"We should warm up the hunter," I said. "It'll be easier to work on it back home." Lisa and I knelt down to start cutting the dog free. It whimpered and its tail wagged feebly as we started to work.

Jaak was silent.

Lisa slapped him on his leg. "Come on, Jaak, get down here. It'll bleed out if you don't hurry up. You know how fragile it is."

Jaak said, "I think we should eat it."

Lisa glanced up, surprised. "You do?"

He shrugged. "Sure."

I looked up from where I was tearing away tangled wires from around the dog's torso. "I thought you wanted it to be your pet. Like

in the zoo."

Jaak shook his head. "Those food pellets are expensive. I'm spending half my salary on food and water filtration, and now this bullshit." He waved his hand at the tangled dog. "You have to watch the sucker all the time. It's not worth it."

"But still, it's your friend. It shook hands with you."

Jaak laughed. "You're my friend." He looked down at the dog, his face wrinkled with thought. "It's, it's…an animal."

Even though we had all idly discussed what it would be like to eat the dog, it was a surprise to hear him so determined to kill it. "Maybe you should sleep on it." I said. "We can get it back to the bunker, fix it up, and then you can decide when you aren't so pissed off about it."

"No." He pulled out his harmonica and played a few notes, a quick jazzy scale. He took the harmonica out of his mouth. "If you want to put up the money for his feed, I'll keep it, I guess, but otherwise.…" He shrugged.

"I don't think you should cook it."

"You don't?" Lisa glanced at me. "We could roast it, right here, on the beach."

I looked down at the dog, a mass of panting, trusting animal. "I still don't think we should do it."

Jaak looked at me seriously. "You want to pay for the feed?"

I sighed. "I'm saving for the new Immersive Response."

"Yeah, well, I've got things I want to buy too, you know." He flexed his muscles, showing off his tattoos. "I mean, what the fuck good does it do?"

"It makes you smile."

"Immersive Response makes you smile. And you don't have to clean up after its crap. Come on, Chen. Admit it. You don't want to take care of it either. It's a pain in the ass."

We all looked at each other, then down at the dog.

* * *

Lisa roasted the dog on a spit, over burning plastics and petroleum skimmed from the ocean. It tasted okay, but in the end it was hard to understand the big deal. I've eaten slagged centaur that tasted better.

Afterward, we walked along the shoreline. Opalescent waves crashed and roared up the sand, leaving jewel slicks as they receded and the Sun sank red in the distance.

Without the dog, we could really enjoy the beach. We didn't have

to worry about whether it was going to step in acid, or tangle in barb-wire half-buried in the sand, or eat something that would keep it up vomiting half the night.

Still, I remember when the dog licked my face and hauled its shaggy bulk onto my bed, and I remember its warm breathing beside me, and sometimes, I miss it.